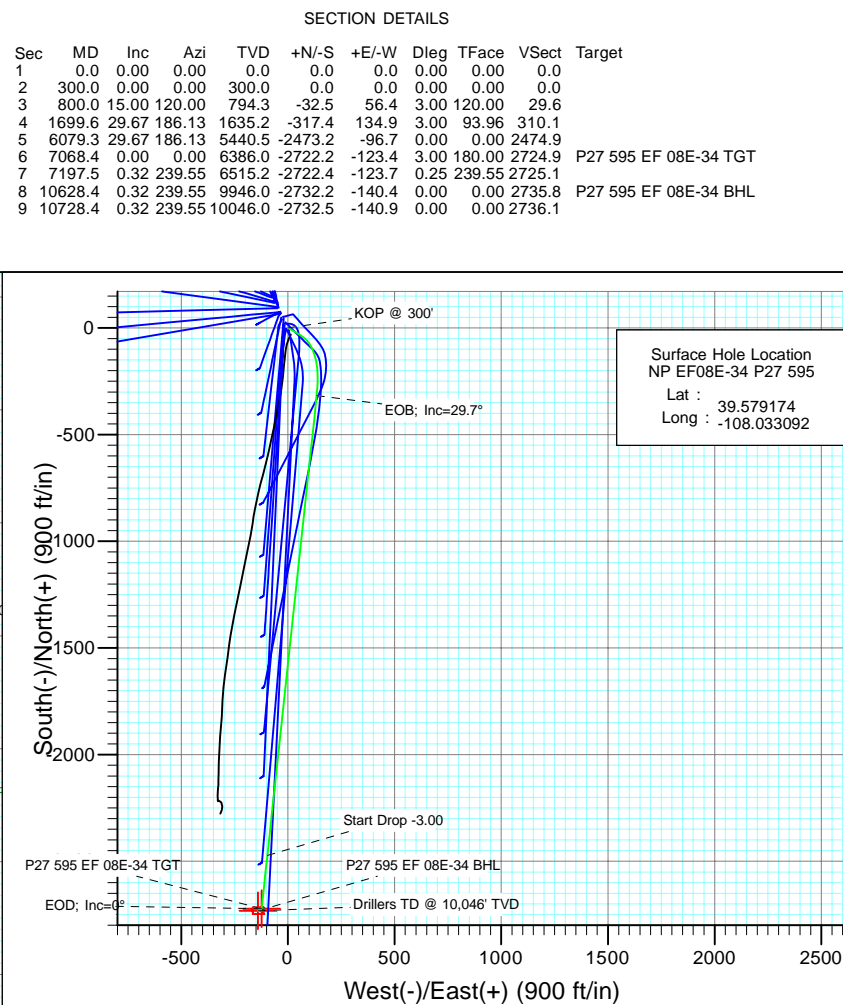
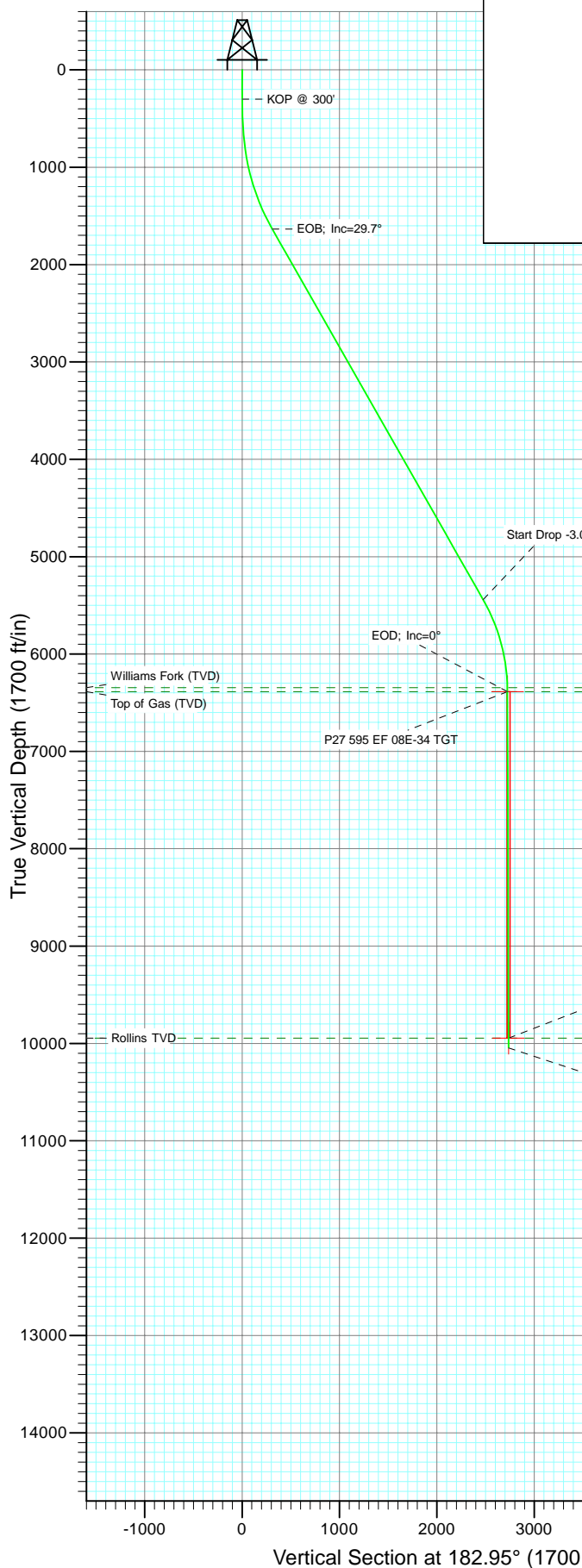




Project: North Piceance
Site: P27 595 (S27-T5S-R95W)
Well: NP EF08E-34 P27 595
Wellbore: DD
Design: Plan #1



Azimuths to True North
Magnetic North: 10.46°

Magnetic Field
Strength: 52346.5nT
Dip Angle: 65.82°
Date: 11/5/2010
Model: IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6346.0	7028.3	Williams Fork (TVD)
6386.0	7068.4	Top of Gas (TVD)
9946.0	10628.4	Rollins TVD

Plan #1 NP EF08E-34 P27 595 WELL @ 6671.0ft (Original Well Elev) North American Datum 1983 Well NP EF08E-34 P27 595, True North							
Type TD	Target No Target (Freehand)	Azimuth 182.95	Origin Type Slot	N/S 0.0	E/W 0.0	From TVD 0.0	
Name	TVD	+N/-S	+E/-W	Latitude		Longitude	
P27 595 EF 08E-34 TGT	6386.0	-2722.2	-123.4	39.571701		-108.033529	
P27 595 EF 08E-34 BHL	9946.0	-2732.2	-140.4	39.571673		-108.033590	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF08E-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	WELL @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF08E-34 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Project	North Piceance		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		P27 595 (S27-T5S-R95W)			
Site Position:		Northing:	1,645,842.89 ft	Latitude:	39.579292
From:	Lat/Long	Easting:	2,286,079.88 ft	Longitude:	-108.033175
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in	Grid Convergence:	-1.60 °

Well	NP EF08E-34 P27 595					
Well Position	+N/-S	0.0 ft	Northing:	1,645,799.42 ft	Latitude:	39.579174
	+E/-W	0.0 ft	Easting:	2,286,102.16 ft	Longitude:	-108.033092
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,649.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/5/2010	10.46	65.82	52,347

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	182.95

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.0	15.00	120.00	794.3	-32.5	56.4	3.00	3.00	0.00	120.00	
1,699.6	29.67	186.13	1,635.2	-317.4	134.9	3.00	1.63	7.35	93.96	
6,079.3	29.67	186.13	5,440.5	-2,473.2	-96.7	0.00	0.00	0.00	0.00	
7,068.4	0.00	0.00	6,386.0	-2,722.2	-123.4	3.00	-3.00	0.00	180.00	P27 595 EF 08E-34 T
7,197.5	0.32	239.55	6,515.2	-2,722.4	-123.7	0.25	0.25	-93.24	239.55	
10,628.4	0.32	239.55	9,946.0	-2,732.2	-140.4	0.00	0.00	0.00	0.00	P27 595 EF 08E-34 B
10,728.4	0.32	239.55	10,046.0	-2,732.5	-140.9	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF08E-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	WELL @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF08E-34 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300'
400.0	3.00	120.00	400.0	-1.3	2.3	1.2	3.00	3.00	
500.0	6.00	120.00	499.6	-5.2	9.1	4.8	3.00	3.00	
600.0	9.00	120.00	598.8	-11.8	20.4	10.7	3.00	3.00	
700.0	12.00	120.00	697.1	-20.9	36.1	19.0	3.00	3.00	
800.0	15.00	120.00	794.3	-32.5	56.4	29.6	3.00	3.00	
900.0	15.09	131.57	890.9	-47.6	77.3	43.6	3.00	0.09	
1,000.0	15.74	142.61	987.3	-67.1	95.3	62.1	3.00	0.65	
1,100.0	16.90	152.48	1,083.3	-90.7	110.2	84.9	3.00	1.16	
1,200.0	18.46	160.92	1,178.6	-118.6	122.1	112.1	3.00	1.56	
1,300.0	20.34	167.97	1,272.9	-150.6	130.9	143.6	3.00	1.88	
1,400.0	22.46	173.81	1,366.0	-186.6	136.6	179.3	3.00	2.11	
1,500.0	24.74	178.66	1,457.7	-226.5	139.2	219.0	3.00	2.29	
1,600.0	27.16	182.72	1,547.6	-270.2	138.6	262.7	3.00	2.42	
1,699.6	29.67	186.13	1,635.2	-317.4	134.9	310.1	3.00	2.52	EOB; Inc=29.7°
1,700.0	29.67	186.13	1,635.5	-317.6	134.8	310.3	0.00	0.00	
1,800.0	29.67	186.13	1,722.4	-366.9	129.5	359.7	0.00	0.00	
1,900.0	29.67	186.13	1,809.3	-416.1	124.3	409.1	0.00	0.00	
2,000.0	29.67	186.13	1,896.2	-465.3	119.0	458.6	0.00	0.00	
2,100.0	29.67	186.13	1,983.1	-514.5	113.7	508.0	0.00	0.00	
2,200.0	29.67	186.13	2,070.0	-563.7	108.4	557.4	0.00	0.00	
2,300.0	29.67	186.13	2,156.9	-613.0	103.1	606.8	0.00	0.00	
2,400.0	29.67	186.13	2,243.8	-662.2	97.8	656.3	0.00	0.00	
2,500.0	29.67	186.13	2,330.6	-711.4	92.5	705.7	0.00	0.00	
2,600.0	29.67	186.13	2,417.5	-760.6	87.3	755.1	0.00	0.00	
2,700.0	29.67	186.13	2,504.4	-809.9	82.0	804.6	0.00	0.00	
2,800.0	29.67	186.13	2,591.3	-859.1	76.7	854.0	0.00	0.00	
2,900.0	29.67	186.13	2,678.2	-908.3	71.4	903.4	0.00	0.00	
3,000.0	29.67	186.13	2,765.1	-957.5	66.1	952.8	0.00	0.00	
3,100.0	29.67	186.13	2,852.0	-1,006.7	60.8	1,002.3	0.00	0.00	
3,200.0	29.67	186.13	2,938.8	-1,056.0	55.5	1,051.7	0.00	0.00	
3,300.0	29.67	186.13	3,025.7	-1,105.2	50.3	1,101.1	0.00	0.00	
3,400.0	29.67	186.13	3,112.6	-1,154.4	45.0	1,150.6	0.00	0.00	
3,500.0	29.67	186.13	3,199.5	-1,203.6	39.7	1,200.0	0.00	0.00	
3,600.0	29.67	186.13	3,286.4	-1,252.9	34.4	1,249.4	0.00	0.00	
3,700.0	29.67	186.13	3,373.3	-1,302.1	29.1	1,298.8	0.00	0.00	
3,800.0	29.67	186.13	3,460.2	-1,351.3	23.8	1,348.3	0.00	0.00	
3,900.0	29.67	186.13	3,547.1	-1,400.5	18.5	1,397.7	0.00	0.00	
4,000.0	29.67	186.13	3,633.9	-1,449.7	13.3	1,447.1	0.00	0.00	
4,100.0	29.67	186.13	3,720.8	-1,499.0	8.0	1,496.6	0.00	0.00	
4,200.0	29.67	186.13	3,807.7	-1,548.2	2.7	1,546.0	0.00	0.00	
4,300.0	29.67	186.13	3,894.6	-1,597.4	-2.6	1,595.4	0.00	0.00	
4,400.0	29.67	186.13	3,981.5	-1,646.6	-7.9	1,644.8	0.00	0.00	
4,500.0	29.67	186.13	4,068.4	-1,695.8	-13.2	1,694.3	0.00	0.00	
4,600.0	29.67	186.13	4,155.3	-1,745.1	-18.5	1,743.7	0.00	0.00	
4,700.0	29.67	186.13	4,242.1	-1,794.3	-23.7	1,793.1	0.00	0.00	
4,800.0	29.67	186.13	4,329.0	-1,843.5	-29.0	1,842.6	0.00	0.00	
4,900.0	29.67	186.13	4,415.9	-1,892.7	-34.3	1,892.0	0.00	0.00	
5,000.0	29.67	186.13	4,502.8	-1,942.0	-39.6	1,941.4	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF08E-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	WELL @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF08E-34 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
5,100.0	29.67	186.13	4,589.7	-1,991.2	-44.9	1,990.8	0.00	0.00	
5,200.0	29.67	186.13	4,676.6	-2,040.4	-50.2	2,040.3	0.00	0.00	
5,300.0	29.67	186.13	4,763.5	-2,089.6	-55.5	2,089.7	0.00	0.00	
5,400.0	29.67	186.13	4,850.3	-2,138.8	-60.8	2,139.1	0.00	0.00	
5,500.0	29.67	186.13	4,937.2	-2,188.1	-66.0	2,188.6	0.00	0.00	
5,600.0	29.67	186.13	5,024.1	-2,237.3	-71.3	2,238.0	0.00	0.00	
5,700.0	29.67	186.13	5,111.0	-2,286.5	-76.6	2,287.4	0.00	0.00	
5,800.0	29.67	186.13	5,197.9	-2,335.7	-81.9	2,336.8	0.00	0.00	
5,900.0	29.67	186.13	5,284.8	-2,385.0	-87.2	2,386.3	0.00	0.00	
6,000.0	29.67	186.13	5,371.7	-2,434.2	-92.5	2,435.7	0.00	0.00	
6,079.3	29.67	186.13	5,440.6	-2,473.2	-96.7	2,474.9	0.00	0.00	Start Drop -3.00
6,100.0	29.05	186.13	5,458.6	-2,483.3	-97.7	2,485.0	3.01	-3.01	
6,200.0	26.05	186.13	5,547.3	-2,529.3	-102.7	2,531.2	3.00	-3.00	
6,300.0	23.05	186.13	5,638.2	-2,570.6	-107.1	2,572.7	3.00	-3.00	
6,400.0	20.05	186.13	5,731.2	-2,607.1	-111.0	2,609.4	3.00	-3.00	
6,500.0	17.05	186.13	5,826.0	-2,638.7	-114.4	2,641.1	3.00	-3.00	
6,600.0	14.05	186.13	5,922.3	-2,665.4	-117.3	2,667.9	3.00	-3.00	
6,700.0	11.05	186.13	6,019.9	-2,687.0	-119.6	2,689.6	3.00	-3.00	
6,800.0	8.05	186.13	6,118.5	-2,703.5	-121.4	2,706.2	3.00	-3.00	
6,900.0	5.05	186.13	6,217.9	-2,714.8	-122.6	2,717.5	3.00	-3.00	
7,000.0	2.05	186.13	6,317.7	-2,721.0	-123.3	2,723.7	3.00	-3.00	
7,028.3	1.20	186.13	6,346.0	-2,721.8	-123.4	2,724.5	3.00	-3.00	Williams Fork (TVD)
7,068.4	0.00	0.00	6,386.0	-2,722.2	-123.4	2,724.9	3.00	-3.00	EOD; Inc=0° - Top of Gas (TVD) - P27 595 EF (
7,100.0	0.08	239.55	6,417.6	-2,722.2	-123.4	2,725.0	0.25	0.25	
7,197.5	0.32	239.55	6,515.2	-2,722.4	-123.7	2,725.1	0.25	0.25	
7,200.0	0.32	239.55	6,517.6	-2,722.4	-123.7	2,725.2	0.00	0.00	
7,300.0	0.32	239.55	6,617.6	-2,722.7	-124.2	2,725.5	0.00	0.00	
7,400.0	0.32	239.55	6,717.6	-2,723.0	-124.7	2,725.8	0.00	0.00	
7,500.0	0.32	239.55	6,817.6	-2,723.2	-125.2	2,726.1	0.00	0.00	
7,600.0	0.32	239.55	6,917.6	-2,723.5	-125.7	2,726.4	0.00	0.00	
7,700.0	0.32	239.55	7,017.6	-2,723.8	-126.2	2,726.7	0.00	0.00	
7,800.0	0.32	239.55	7,117.6	-2,724.1	-126.6	2,727.0	0.00	0.00	
7,900.0	0.32	239.55	7,217.6	-2,724.4	-127.1	2,727.3	0.00	0.00	
8,000.0	0.32	239.55	7,317.6	-2,724.7	-127.6	2,727.6	0.00	0.00	
8,100.0	0.32	239.55	7,417.6	-2,725.0	-128.1	2,727.9	0.00	0.00	
8,200.0	0.32	239.55	7,517.6	-2,725.2	-128.6	2,728.3	0.00	0.00	
8,300.0	0.32	239.55	7,617.6	-2,725.5	-129.1	2,728.6	0.00	0.00	
8,400.0	0.32	239.55	7,717.6	-2,725.8	-129.6	2,728.9	0.00	0.00	
8,500.0	0.32	239.55	7,817.6	-2,726.1	-130.0	2,729.2	0.00	0.00	
8,600.0	0.32	239.55	7,917.6	-2,726.4	-130.5	2,729.5	0.00	0.00	
8,700.0	0.32	239.55	8,017.6	-2,726.7	-131.0	2,729.8	0.00	0.00	
8,800.0	0.32	239.55	8,117.6	-2,727.0	-131.5	2,730.1	0.00	0.00	
8,900.0	0.32	239.55	8,217.6	-2,727.2	-132.0	2,730.4	0.00	0.00	
9,000.0	0.32	239.55	8,317.6	-2,727.5	-132.5	2,730.7	0.00	0.00	
9,100.0	0.32	239.55	8,417.6	-2,727.8	-133.0	2,731.0	0.00	0.00	
9,200.0	0.32	239.55	8,517.6	-2,728.1	-133.4	2,731.4	0.00	0.00	
9,300.0	0.32	239.55	8,617.6	-2,728.4	-133.9	2,731.7	0.00	0.00	
9,400.0	0.32	239.55	8,717.6	-2,728.7	-134.4	2,732.0	0.00	0.00	
9,500.0	0.32	239.55	8,817.6	-2,729.0	-134.9	2,732.3	0.00	0.00	
9,600.0	0.32	239.55	8,917.6	-2,729.2	-135.4	2,732.6	0.00	0.00	
9,700.0	0.32	239.55	9,017.6	-2,729.5	-135.9	2,732.9	0.00	0.00	
9,800.0	0.32	239.55	9,117.6	-2,729.8	-136.4	2,733.2	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF08E-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	WELL @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF08E-34 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,900.0	0.32	239.55	9,217.6	-2,730.1	-136.8	2,733.5	0.00	0.00	
10,000.0	0.32	239.55	9,317.6	-2,730.4	-137.3	2,733.8	0.00	0.00	
10,100.0	0.32	239.55	9,417.6	-2,730.7	-137.8	2,734.1	0.00	0.00	
10,200.0	0.32	239.55	9,517.6	-2,731.0	-138.3	2,734.5	0.00	0.00	
10,300.0	0.32	239.55	9,617.6	-2,731.2	-138.8	2,734.8	0.00	0.00	
10,400.0	0.32	239.55	9,717.6	-2,731.5	-139.3	2,735.1	0.00	0.00	
10,500.0	0.32	239.55	9,817.6	-2,731.8	-139.8	2,735.4	0.00	0.00	
10,600.0	0.32	239.55	9,917.6	-2,732.1	-140.2	2,735.7	0.00	0.00	
10,628.4	0.32	239.55	9,946.0	-2,732.2	-140.4	2,735.8	0.00	0.00	Rollins TVD - P27 595 EF 08E-34 BHL
10,700.0	0.32	239.55	10,017.6	-2,732.4	-140.7	2,736.0	0.00	0.00	
10,728.4	0.32	239.55	10,046.0	-2,732.5	-140.9	2,736.1	0.00	0.00	Drillers TD @ 10,046' TVD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
P27 595 EF 08E-34 TG1 - plan hits target center - Point	0.00	0.00	6,386.0	-2,722.2	-123.4	1,643,081.72	2,285,902.91	39.571701	-108.033529
P27 595 EF 08E-34 BHL - plan hits target center - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	9,946.0	-2,732.2	-140.4	1,643,072.21	2,285,885.66	39.571673	-108.033590

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,028.3	6,346.0	Williams Fork (TVD)			
7,068.4	6,386.0	Top of Gas (TVD)			
10,628.4	9,946.0	Rollins TVD			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.0	300.0	0.0	0.0	KOP @ 300'
1,699.6	1,635.2	-32.5	56.4	EOB; Inc=29.7°
6,079.3	5,440.5	-317.4	134.9	Start Drop -3.00
7,068.4	6,386.0	-2,473.2	-96.7	EOD; Inc=0°
10,728.4	10,046.0	-2,722.2	-123.4	Drillers TD @ 10,046' TVD